

What is claimed is:

1. A transporter comprising:
 - a support platform for supporting a load, the loaded support platform defining fore-aft and lateral planes and characterized by a load distribution;
 - 5 a plurality of ground contacting elements coupled to the support platform;
 - a motorized drive arrangement for driving at least one of the plurality of ground contacting elements;
 - a sensor module for generating a signal indicative of the load distribution of the loaded support platform; and
 - 10 a controller for commanding the motorized drive arrangement based on the load distribution.
2. The transporter according to claim 1, wherein the plurality of ground contacting elements include at least two wheels.
- 15 3. The transporter according to claim 2, wherein the at least two wheels include:
 - a first wheel rotatable about a first axis; and
 - a second wheel rotatable about a second axis, the second axis disposed aft of the first axis.
- 20 4. The transporter according to claim 1, wherein the controller is configured so that fore and aft motion of the transporter is controlled by shifting the load distribution of the loaded support platform fore and aft.
- 25 5. The transporter according to claim 1, wherein the loaded support platform is characterized by a center of gravity having a position, and wherein the controller is configured so that fore and aft motion of the transporter is controlled by shifting the position of the center of gravity of the loaded support platform fore and aft.
- 30 6. The transporter according to claim 1, wherein the controller is configured so that turning of the transporter is controlled by laterally shifting the load distribution of the loaded support platform.
7. The transporter according to claim 1, wherein the loaded support platform is
35 characterized by a center of gravity having a position, and wherein the controller is configured so that turning of the transporter is controlled by laterally shifting the position of the center of gravity of the loaded support platform.

8. The transporter according to claim 1, wherein the transporter is statically stable with respect to tipping in the fore-aft plane.

5 9. The transporter according to claim 1, wherein the plurality of ground contacting elements are coupled to the support platform such that the transporter is statically stable with respect to tipping in both the fore-aft and lateral planes.

10 10. The transporter according to claim 1, wherein the sensor module includes at least one sensor selected from the group of sensors consisting of a load sensor, force sensor, and a tilt sensor.

11. The transporter according to claim 1, wherein the sensor module adds an offset in generating the signal.

15 12. The transporter according to claim 11, wherein the offset is adjustable via a user interface.

20 13. The transporter according to claim 1, wherein the controller commands the motorized drive arrangement so as to cause an acceleration of the transporter, the transporter further including an indicator for providing an indication based on the acceleration, the indication apprehensible externally.

25 14. The transporter according to claim 13, wherein the indicator is viewable from behind the transporter.

15. The transporter according to claim 1, wherein the transporter further includes a user interface, wherein the controller commands the motorized drive arrangement based at least on a signal provided by the user interface.

30 16. A transporter according to claim 15, wherein the user interface is selected from the group of user interfaces consisting of a joystick and a dial.

35 17. A method for controlling a transporter having a support platform for supporting a load, the loaded support platform defining fore-aft and lateral planes and characterized by a load distribution, the transporter further including a plurality of ground-contacting elements, the transporter further including a motorized drive arrangement for driving at least one of the plurality of ground-contacting elements, the method comprising:
determining the load distribution of the loaded support platform;

commanding the motorized drive arrangement based at least on the load distribution.

18. The method according to claim 17, wherein determining the load distribution of the loaded platform includes sensing a load above at least one ground-contacting element.

19. The method according to claim 17, wherein determining the load distribution of the loaded platform includes sensing a tilt of the loaded support platform.

20. The method according to claim 17, wherein determining the load distribution of the loaded platform includes sensing a roll angle of the loaded support platform.

21. The method according to claim 17, wherein commanding the motorized drive is further based on a control signal from a transporter user interface.

22. The method according to claim 17, further comprising providing an externally apprehensible indication based on motion commanded.

23. The method according to claim 22, wherein providing the externally apprehensible indication is based on acceleration commanded.

24. The method according to claim 22, wherein providing the externally apprehensible indication includes illuminating a light.

25. A transporter comprising:

a support platform for supporting a load, the support platform defining a fore-aft plane and a lateral plane;

a plurality of ground contacting elements coupled to the support platform such that the support platform is statically stable with respect to tipping in the fore-aft and the lateral plane;

a pivot element pivotally coupled to at least one of the ground contacting elements such that the pivot element is capable of tilting;

a user interface for causing a tilt of the pivot element;

a sensor module for generating a signal indicative of the tilt of the pivot element;

a motorized drive arrangement for driving at least one of the plurality of ground contacting elements;

and a controller for commanding the motorized drive arrangement based on the tilt of the pivot element.

26. The transporter according to claim 25, wherein the pivot element is capable of tilting in at least the fore-aft plane.

5 27. The transporter according to claim 25, wherein the plurality of ground contacting elements include two laterally disposed wheels rotatable around an axis, the pivot element pivotally coupled to the axis.

10 28. The transporter according to claim 25, wherein the pivot element is flexibly coupled to the support platform.

29. The transporter according to claim 28, wherein the pivot element is flexibly coupled to the support platform via at least one spring.

15 30. The transporter according to claim 25, wherein the user interface is a handlebar coupled to the pivot element.

20 31. A method for controlling a transporter having a support platform for supporting a load, the support platform defining fore-aft and lateral planes, the transporter including a plurality of ground-contacting elements such that the transporter is statically stable with respect to tipping, the transporter further including a pivot element pivotally coupled to at least one of the ground contacting elements such that the pivot element is capable of tilting, and a motorized drive arrangement for driving at least one of the plurality of ground-contacting elements, the method comprising:

25 causing a tilt of the pivot element; and
commanding the motorized drive arrangement based at least on the tilt.

32. A method according to claim 31, wherein causing the tilt includes tilting a handlebar coupled to the pivot element.

30 33. A method according to claim 31, further comprising flexibly coupling the pivot element to the support platform.